

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**
(PCT Rule 43*bis*.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2004/050310

International filing date (day/month/year)
15.03.2004

Priority date (day/month/year)
27.03.2003

International Patent Classification (IPC) or both national classification and IPC
H04L29/06

Applicant
MOTOROLA INC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
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International application No.
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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-4, 7-8
	No: Claims	5, 6
Inventive step (IS)	Yes: Claims	1-4, 7-8
	No: Claims	5, 6
Industrial applicability (IA)	Yes: Claims	1-8
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Re Item V.

- 1 The following document (D) is referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: WO 00 08818 A (SUN MICROSYSTEMS INC) 17 February 2000
(2000-02-17)

- 2 The applicant's letter dated 17 March 2004 concerning the co-pending European Patent Application EP-03290770 has been taken into consideration when preparing this Written Opinion.
- 3 The subject-matter of claims 1, 7 and 8 fulfill the requirements of Article 33(1)(2)(3) PCT with respect to novelty, inventive step and industrial applicability.
- 3.1 The subject-matter of claim 1 relates to a method of communication between a private network and a roaming mobile terminal and a gateway through which said communication passes and which provides security protection for said private network, the protocols of said communication including security association bundles each including a security association between said mobile terminal and said gateway for inbound communication and another security association for outbound communication, wherein in response to a handover of communication causing an IP address of said mobile terminal to change to a new IP address, said mobile terminal updates its inbound security association from said gateway so that it can receive packets sent to it with said new IP address as destination, said mobile terminal sends a first signalling message with said home agent as destination in a secure tunnel to said gateway, said first signalling message indicating said new IP address in secure form to said home agent. These features are known from document D1.

The subject-matter of claim 1 differs from document in the following features:

The inbound security association of said gateway from said mobile terminal accepts said first signalling message without checking its source address, said gateway forwards said first signalling message within said private network to said home agent, said home agent checks the validity of said first signalling message and, if it is valid, updates its address data and sends a second signalling message

to said gateway indicating said new address and said gateway updates its outbound security association with said mobile terminal in response to the new address indicated.

The technical problem to be solved can thus be stated as to provide a centralized access management for a plurality of gateways in a private network when using Mobile IP.

The problem is solved by the above identified difference. None of the cited documents hint to such a solution.

- 3.2 Independent claims 7 and 8 relate to the respective gateway and home agent and contain the respective new and inventive features identified above. Consequently, claims 7 and 8 fulfill the requirements of Article 33(1)(2)(3) PCT.
- 4 Independent apparatus claims 5 and 6 do not fulfill the requirements of Article 33(1)(2) because their respective subject-matter is not new with respect to document D1. The mobile terminal does not execute any of the new and inventive method steps as identified above (see also Item VIII of this communication).
- 5 Claims 2 to 4 are (truly) dependent on claim 1 and consequently fulfill the requirements of Article 33(1)(2)(3) PCT.

Re Item VII.

- 1 The two-part form has to be adapted to correctly identify the known features from the new and inventive features according to Rule 6.3(b).
- 2 In order to meet the requirements of Rule 5.1(a)(ii) PCT the document D1 cited above has to be acknowledged and briefly discussed in the opening part of the description.

Re Item VIII.

- 1 The application does not fulfill the requirements of Article 6 PCT with respect to clarity.
 - 1.1 Claims 5 to 8 are not clear with respect to their category. The claims are specified as **apparatus** claims (a mobile terminal, a gateway, a home agent) but refer to claims of the **method** category, thus mixing the two categories (see also PCT-Gazette, Section IV, III-4.1).
 - 1.2 Moreover, the method steps to which the apparatus claims 5 to 8 refer are not executed by the respective apparatus claimed thereby leaving doubt as to the extent of subject-matter specified by the respective claims (e.g. the mobile terminal of claim 6 does not execute the signalling between the home agent and the gateway as specified in claim 1).